UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,017	01/28/2004	Toshio Miyazawa	6453P034	4732

8791 7590 12/05/2007

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER	
RASHID, DAVID	
ART UNIT	**PAPER NUMBER**
2624	

MAIL DATE	DELIVERY MODE
12/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/767,017	MIYAZAWA ET AL.	
	Examiner	Art Unit	
	David P. Rashid	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 October 2007* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

All of the examiner's suggestions presented herein below have been assumed for examination purposes, unless otherwise noted.

Amendments

1. This office action is responsive to the claim and specification amendment received on 10/15/2007. **Claims 1-16** remain pending.

Drawings

2. The following is a quote from 37 CFR 1.84(q):

> Lead lines are those lines between the reference characters and the details referred to. Such lines may be straight or curved and should be as short as possible. They must originate in the immediate proximity of the reference character and extend to the feature indicated.

3. FIG. 3 and FIG. 4 are objected to under 37 CFR 1.84(q) for failing to properly use lead lines when necessary. It is suggested to connect elements 120 through 123 to their respective detailed referred to by using lead lines.

4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. In response to applicant's specification amendments and remarks received on 5/15/2007, the previous specification objections are withdrawn.

Claim Objections

6. The following is a quotation of 37 CFR 1.75(a):

> The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

7. **Claim 5** is objected to under 37 CFR 1.75(a), as failing to conform to particularly point out and distinctly claim the subject matter which application regards as his invention or discovery.

(i) Claim 5, line 7 appears to have a typographical error – suggest changing to "first rectangular region and creates".

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 1, 3, 5, 9, 11,** and **13** are rejected under 35 U.S.C. 102(b) as being anticipated by Skodras et al. (The JPEG 2000 Still Image Compression Standard, IEEE Signal Processing Magazine, Sept 2001, pg 36 – 58).

Regarding **claim 1**, Skodras teaches an image processing apparatus ("computer" in left column, pg 38; FIG. 2, pg 38) for hierarchically compressing ("Compressed Image Data" in FIG. 2, pg 38) and coding ("Entropy Encoding" in FIG. 2, pg 38) image data by subjecting pixel values of the image data ("Source Image Data" in FIG. 2, pg 38) to a discrete wavelet transform ("Forward Transform" in FIG. 2, pg 38; "[p]rior to computation of the forward discrete wavelet transform (DWT)...", left column, pg 40), quantization and coding for each of one or a plurality of rectangular regions into which the image data is divided ("The image components are (optionally) decomposed into rectangular tiles.", left column, pg 39; Image Tiling Section, right column, pg 39), the image processing comprising:

a hierarchical coding unit (unit responsible for producing the packet stream in FIG. 11 in pg 45) to compress and code the image data in a state where the image data is divided for each hierarchical region (FIG. 11, pg 45; "DWT on Each Tile" in FIG. 3, pg 39 wherein the hierarchical regions are the image component itself (level -1), tiles (level 0), precinct (level 1),

and code blocks (level 2)), to obtain compressed codes ("Code Stream" in FIG. 11, pg 45), wherein the hierarchical coding unit comprises:

a first-level coding unit (coding unit responsible for coding all of the hierarchy levels in FIG. 11) to receive the image data ("Image Component" and "Code Stream" in FIG. 11) and to create the compressed codes of a first hierarchical layer (tiles (level 0) in FIG. 11); and

a second-level coding unit (coding unit responsible for coding all of the hierarchy levels in FIG. 11, whether or not it is the same or a different coding unit to the first coding unit) to receive a sub-band (the sub-band of the tile "layer" creates the whole precinct ("packet") as shown in FIG. 11 by dashed lines on the right side) of the first hierarchical layer from the first-level coding unit and to create the compressed codes of a second hierarchical layer (precinct (level 1) in FIG. 11), wherein the second hierarchical layer is a lower hierarchical layer than the first hierarchical layer (the precincts are at a lower hierarchical layer than tiles in FIG. 11); and

a distributively storing unit ("Store and Transmit" in FIG. 2, pg 38) to distributively store (FIG. 11, pg 45 wherein each tile layer is a separate portion in the code stream) the compressed codes which are divided for each hierarchical layer by the hierarchical coding unit into a storage unit (it is implicit if not already inherent that the image processing apparatus computer of Skodras has a memory storage unit), wherein the distributively storing unit comprises:

a first-level storing unit (unit responsible for storing the "[c]ode [s]tream" in FIG. 11, and thus all hierarchical layers within it) to store the compressed codes of the first hierarchical layer (tiles (level 0) in FIG. 11); and

a second-level storing unit (unit responsible for storing the "[c]ode [s]tream" in FIG. 11, and thus all hierarchical layers within it) to store the compressed codes of the second hierarchical layer (precinct (level 1) in FIG. 11).

The same argument can be applied for the first hierarchical layer being the precinct layer and the second hierarchical layer being the code block layer as shown in FIG. 11, OR from tile to code block, image component to tile, image component to precinct, OR image component to code block.

Regarding **claim 3**, claim 1 recites identical features as in claim 3. Thus, references/arguments equivalent to those presented above for claim 1 are equally applicable to claim 3. The means-plus-function language is anticipated by the computer hardware ("computer" in left column, pg 38; FIG. 2, pg 38) of Skodras.

Regarding **claim 5**, Skodras teaches an image processing apparatus ("computer" in left column, pg 38; FIG. 2, pg 38) for hierarchically compressing ("Compressed Image Data" in FIG. 2, pg 38) and coding ("Entropy Encoding" in FIG. 2, pg 38) image data by subjecting pixel values of the image data ("Source Image Data" in FIG. 2, pg 38) to a discrete wavelet transform ("Forward Transform" in FIG. 2, pg 38; "[p]rior to computation of the forward discrete wavelet transform (DWT)...", left column, pg 40), quantization and coding for each of one or a plurality of rectangular regions into which the image data is divided ("The image components are (optionally) decomposed into rectangular tiles.", left column, pg 39; Image Tiling Section, right column, pg 39), the image processing comprising:

a rectangular region coding unit ("Tiling" in FIG. 3, pg 39) to compress and code the image data in a state where the image data is divided for each rectangular region ("DWT on Each

Tile" in FIG. 3, pg 39; "All operations, including component mixing, wavelet transform, quantization and entropy coding are performed independently on the image tiles (Fig. 3).", right column, pg 39), to obtain compressed codes, wherein the rectangular region coding unit creates compressed codes for a first rectangular (tiles (level 0) in FIG. 11; a rectangular region as evident in FIG. 9 and FIG. 3) and creates compressed codes for a second rectangular region (precinct (level 1) in FIG. 11; a rectangular region as evident in FIG. 9 ad FIG. 3); and

a distributively storing unit ("Store and Transmit" in FIG. 2, pg 38) to distributively store (FIG. 11, pg 45 wherein each tile layer is a separate portion in the code stream) the compressed codes which are divided for each rectangular region by the rectangular region coding unit, wherein the distributively storing unit comprises:

a first storing unit (unit responsible for storing the "[c]ode [s]tream" in FIG. 11, and thus all hierarchical layers within it) to store the compressed codes of the first rectangular region; and

a second storing unit (unit responsible for storing the "[c]ode [s]tream" in FIG. 11, and thus all hierarchical layers within it) to store the compressed codes of the second rectangular region.

Regarding **claim 9**, claim 5 recites identical features as in claim 9. Thus, references/arguments equivalent to those presented above for claim 5 are equally applicable to claim 9. The means-plus-function language is anticipated by the computer hardware ("computer" in left column, pg 38; FIG. 2, pg 38) of Skodras.

Regarding **claim 11**, claim 1 recites identical features as in claim 11. Thus, references/arguments equivalent to those presented above for claim 1 are equally applicable to claim 11.

Regarding **claim 13**, claim 5 recites identical features as in claim 13. Thus, references/arguments equivalent to those presented above for claim 5 are equally applicable to claim 13.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. **Claims 2, 4, 7, 10, 12,** and **15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Skodras et al. (The JPEG 2000 Still Image Compression Standard, IEEE Signal Processing Magazine, Sept 2001, pg 36 – 58) in view of Qian et al. (US 6,070,167 A).

Regarding **claim 2**, while Skodras teaches an image processing apparatus ("computer" in left column, pg 38; FIG. 2, pg 38) for hierarchically compressing ("Compressed Image Data" in FIG. 2, pg 38) and coding ("Entropy Encoding" in FIG. 2, pg 38) image data by subjecting pixel values of the image data ("Source Image Data" in FIG. 2, pg 38) to a discrete wavelet transform ("Forward Transform" in FIG. 2, pg 38; "[p]rior to computation of the forward discrete wavelet transform (DWT)...", left column, pg 40), quantization and coding for each of one or a plurality of rectangular regions into which the image data is divided ("The image components are (optionally) decomposed into rectangular tiles.", left column, pg 39; Image Tiling Section, right column, pg 39), the image processing apparatus forming an electronic equipment (the computer to execute FIG. 2, pg 38 forms electronic equipment) and comprising:

a hierarchical coding unit (unit responsible for producing the packet stream in FIG. 11 in pg 45) to compress and code the image data in a state where the image data is divided for each hierarchical region (FIG. 11, pg 45; "DWT on Each Tile" in FIG. 3, pg 39 wherein the hierarchical regions are the tiles (level 0), precinct (level 1), and code blocks (level 2)), to obtain compressed codes ("Code Stream" in FIG. 11, pg 45); and

a distributively storing unit ("Store and Transmit" in FIG. 2, pg 38) to distributively store (FIG. 11, pg 45 wherein each tile layer is a separate portion in the code stream) the compressed codes which are divided for each hierarchical layer by the hierarchical coding unit into a storage unit (it is implicit if not already inherent that the image processing apparatus computer of Skodras has a memory storage unit), Skodras does not teach

(i) electronic equipment which is coupled to a network having other electronic equipments coupled thereto; and

(ii) distributively storing information into a storage unit of each of the other electronic equipments.

Qian et al. discloses a hierarchical method and system for object-based audiovisual descriptive tagging of images for information retrieval, editing, and manipulation (FIG. 1) that teaches

(i) electronic equipment ("computer" in Col. 2, lines 58 – 67; FIG. 1, elements 12, 14, 15, 16, 17, 20) which is coupled to a network (FIG. 1, element 18) having other electronic equipments coupled thereto (a computer network is by definition composed of multiple computers being connected together using a telecommunication system for the purpose of sharing data, resources, and communication); and

(ii) distributively storing information into a storage unit of each of the other electronic equipments (Col. 3, lines 31 – 34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the electronic equipment of Skodras to include having other electronic equipments coupled thereto as taught by Qian and the distributively storing unit of Skodras to include storing the hierarchical layered compressed codes as taught by Qian "...to develop a hierarchical data structure and method that enables association of descriptive data in an image.", Qian, Col. 1, lines 59 – 61 and "to provide a system and method where the descriptive data may be specific to objects in the image and may include textual information, links to other files, other objects within the same image or other images, or links to web pages, and object features, such as shape, and audio annotation.", Qian, Col. 1, lines 62 – 67.

Regarding **claim 4**, claim 2 recites identical features as in claim 4. Thus, references/arguments equivalent to those presented above for claim 2 are equally applicable to claim 4. The means-plus-function language is anticipated by the computer hardware ("computer" in left column, pg 38; FIG. 2, pg 38) of Skodras.

Regarding **claim 7**, while Skodras teaches an image processing apparatus ("computer" in left column, pg 38; FIG. 2, pg 38) for hierarchically compressing ("Compressed Image Data" in FIG. 2, pg 38) and coding ("Entropy Encoding" in FIG. 2, pg 38) image data by subjecting pixel values of the image data ("Source Image Data" in FIG. 2, pg 38) to a discrete wavelet transform ("Forward Transform" in FIG. 2, pg 38; "[p]rior to computation of the forward discrete wavelet transform (DWT)...", left column, pg 40), quantization and coding for each of one or a plurality of rectangular regions into which the image data is divided ("The image components are

(optionally) decomposed into rectangular tiles.", left column, pg 39; Image Tiling Section, right column, pg 39), the image processing apparatus forming an electronic equipment (the computer to execute FIG. 2, pg 38 forms electronic equipment) and comprising:

a rectangular region coding unit ("Tiling" in FIG. 3, pg 39) to compress and code the image data in a state where the image data is divided for each rectangular region ("DWT on Each Tile" in FIG. 3, pg 39; "All operations, including component mixing, wavelet transform, quantization and entropy coding are performed independently on the image tiles (Fig. 3).", right column, pg 39), to obtain compressed codes ("Code Stream" in FIG. 11, pg 45); and

a distributively storing unit ("Store and Transmit" in FIG. 2, pg 38) to distributively store (FIG. 11, pg 45 wherein each tile layer is a separate portion in the code stream) the compressed codes which are divided for each rectangular region by the rectangular region coding unit into a storage unit (it is implicit if not already inherent that the image processing apparatus computer of Skodras has a memory storage unit), Skodras does not teach

(i) electronic equipment which is coupled to a network having other electronic equipments coupled thereto; and

(ii) distributively storing information into a storage unit of each of the other electronic equipments.

Qian et al. discloses a hierarchical method and system for object-based audiovisual descriptive tagging of images for information retrieval, editing, and manipulation (FIG. 1) that teaches

(i) electronic equipment ("computer" in Col. 2, lines 58 – 67; FIG. 1, elements 12, 14, 15, 16, 17, 20) which is coupled to a network (FIG. 1, element 18) having other electronic

equipments coupled thereto (a computer network is by definition composed of multiple computers being connected together using a telecommunication system for the purpose of sharing data, resources, and communication); and

(ii) distributively storing information into a storage unit of each of the other electronic equipments (Col. 3, lines 31 – 34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the electronic equipment of Skodras to include having other electronic equipments coupled thereto as taught by Qian and the distributively storing unit of Skodras to include storing the hierarchical layered compressed codes as taught by Qian "...to develop a hierarchical data structure and method that enables association of descriptive data in an image.", Qian, Col. 1, lines 59 – 61 and "to provide a system and method where the descriptive data may be specific to objects in the image and may include textual information, links to other files, other objects within the same image or other images, or links to web pages, and object features, such as shape, and audio annotation.", Qian, Col. 1, lines 62 – 67.

Regarding **claim 10**, claim 7 recites identical features as in claim 10. Thus, references/arguments equivalent to those presented above for claim 7 are equally applicable to claim 10. The means-plus-function language is anticipated by the computer hardware ("computer" in left column, pg 38; FIG. 2, pg 38) of Skodras.

Regarding **claim 12**, claim 2 recites identical features as in claim 12. Thus, references/arguments equivalent to those presented above for claim 2 are equally applicable to claim 12.

Regarding **claim 15**, claim 7 recites identical features as in claim 15. Thus, references/arguments equivalent to those presented above for claim 7 are equally applicable to claim 15.

12. **Claims 6** and **14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Skodras et al. (The JPEG 2000 Still Image Compression Standard, IEEE Signal Processing Magazine, Sept 2001, pg 36 – 58) in view of Beek et al. (US 2002/0091665 A1).

Regarding **claim 6**, while Skodras discloses the image processing apparatus as claimed in claim 5, though Skodras hints at other forms of decomposition (besides tiles) citing "The image components are (optionally) decomposed into rectangular tiles. The tile-component is the basic unit of the original or reconstructed image.", left column, pg 39), Skodras does not teach wherein the rectangular region coding unit compresses and codes the image data with a decomposition level dependent on a type of the image data, a type of region of the image data, a type of source electronic equipment of the image data, or an external instruction.

Beek discloses metadata in JPEG 2000 file format that teaches "external instruction" with use of the functions SegmentDecomposition Decomposition, DecompositionDataType Datatype and DecompositionType Attribute (paragraphs [0036] through [0038]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for rectangular region coding unit as taught by Skodras to compress and code the image data with a decomposition level dependent on external instruction as taught by Beek "...so that all complaint JPEG2000 viewers will be able to render the image in a proper manner and in addition process the additional information, if desired.", Beek, paragraph [0016].

Regarding **claim 14**, claim 6 recites identical features as in claim 14. Thus, references/arguments equivalent to those presented above for claim 6 are equally applicable to claim 14.

13. **Claims 8** and **16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Skodras et al. (The JPEG 2000 Still Image Compression Standard, IEEE Signal Processing Magazine, Sept 2001, pg 36 – 58) in view of Qian et al. (US 6,070,167 A) and Beek et al. (US 2002/0091665 A1).

Regarding **claim 8**, claim 6 recites identical features as in claim 8. Thus, references/arguments equivalent to those presented above for claim 6 are equally applicable to claim 8.

Regarding **claim 16**, claim 6 recites identical features as in claim 16. Thus, references/arguments equivalent to those presented above for claim 6 are equally applicable to claim 16.

Response to Arguments

14. Applicant's arguments filed on 10/15/2007 with respect to independent **claims 1 – 16** have been respectfully and fully considered, but they are not found persuasive.

Summary of Remarks regarding **claims 1, 3, 5, 9, 11,** and **13:**

Applicant argues that although Skodras discloses a compression engine that decomposes tiles into different resolution levels, nothing in Skodras discloses that the compression engine includes two coding units, the first coding unit to create the compressed codes of the first level,

and a second coding unit to receive a sub-band of the first coding unit and to create the compressed codes of the second level. As such, Skodras fails to disclose at least these limitations of the claims (@ *response pages 16-17*).

Moreover, Applicant argues that claim 1 requires a distributively storing unit that includes two storing units, the first storing unit to store the compressed codes of the first hierarchical layer, and the second storing unit to store the compressed codes of the second hierarchical layer. Applicant respectfully submits that claim 1 fails to disclose at least these limitations. As described above, Skodras discloses a compression engine that decomposes tiles into different resolution lever; however, even if it is implicit or inherent that the image processing computer of Skodras has a memory storage unit, nothing in Skodras discloses that a distributively storing unit that distributively stores the compressed codes in a first-level storing unit to store the first hierarchical layer and in a second-level storing unit to store the second hierarchical layer. As such, Skodras fails to disclose at least these limitations of the claims (@ *response page 17*).

Applicant argues that claims 3, 5, 9, 11, and 13 are patentable over the cited reference for similar reasons described above with respect to claim 1 (@ *response page 17*).

Examiner's Response regarding **claims 1, 3, 5, 9, 11,** and **13:**

However, the Examiner asserts that Skodras does disclose a compression engine including a first coding unit (the coding unit responsible for coding all of the hierarchy levels in FIG. 11) to create the compressed codes of the first level (tiles (level 0) in FIG. 11), and a second coding unit (the coding unit responsible for coding all of the hierarchy levels in FIG. 11, whether or not it is the same or a different coding unit to the first coding unit) to receive a sub-band of the

first coding unit (it must receive the sub-band of the first coding unit if it is to code what is within it) and to create the compressed codes of the second level (precinct (level 1) in FIG. 11). The claims do not have any limitation of separate coding units as "a first-level coding unit...and a second level-coding unit"

Skodras does disclose a distributively storing unit (the storing unit responsible for storing the "Code Stream" in FIG. 11 that stores all of the hierarchical layers) that distributively stores the compressed codes in a first-level storing unit to store the first hierarchical layer and in a second-level storing unit to store the second hierarchical layer. The storing unit responsible for the main (layer -1) code stream distributively stores all hierarchical layers (tile, precinct, and code block) as shown in FIG. 11. The claims do not have any limitation of separate storing units as "a first-level storing unit...and a second-level storing unit" could suggest the possibility of the same storing unit (also with the argument that there are in fact two separate storing units if the prior art suggests storing the code stream hierarchical layers in "separate" locations), which may possibly have overcome the prior art.

Claims 3, 5, 9, 11, and 13 are not patentable over the cited reference for similar reasons described above with respect to claim 1.

Summary of Remarks regarding **claims 2, 4, 7, 10, 12,** and **15:**

Applicant argues that the Office action has failed to establish a prima facie case of obviousness regarding the combination of the cited references because the Office action has only made a *conclusory statement* that it would have been obvious for the electronic equipment of Skodras to include other electronic components coupled thereto as taught by Qian and the

distributively storing unit of Skodras to include storing the compressed codes of Skodras as taught by Qian "to develop a hierarchical data structure and method that enables association of descriptive data in an image," without explaining what specific understanding or technological principle within the knowledge of one of ordinary skill in the art would have prompted one of ordinary skill in the art to combine the elements in the manner claimed (@ *response page 18*).

Qian, however, fails to disclose a distributively storing unit that distributively stores compressed codes that have been divided for each hierarchical layer by the hierarchical coding unit into a storage unit of each of the other electronic components, as required by claim 2 (@ *response pages 20-21*).

Applicant argues that claims 4, 7, 10, 12, and 15 are patentable over the cited reference for similar reasons described above with respect to claim 2 (@ *response page 21*).

Examiner's Response regarding **claims 2, 4, 7, 10, 12,** and **15:**

Claim 2 cites "the image processing apparatus forming an electronic equipment which is coupled to a network having other electronic equipments coupled thereto...and a distributively storing unit to distributively store the compressed codes that are divided for each hierarchical layer by the hierarchical coding unit into a storage unit of each of the other electronic equipments." The Examiner respectfully understands the Applicants argument as shown below, but the Examiner believes this claim limitation is broad enough to also read that the compressed codes ("Code Stream" in FIG. 11) that have been already divided for each hierarchical layer by the hierarchical coding unit (refer to claims 1 and 2 in the rejection section; FIG. 11) are each (as a whole) being stored on each of the other electronic equipments.

Applicant's Argument:

Hierarchical Layer 1 → Electronic Equipment 1

Hierarchical Layer 2 → Electronic Equipment 2

...

Hierarchical Layer N→ Electronic Equipment N

Examiner's Argument

Hierarchical Layer 1, 2, ...,N ("Code Stream" in FIG. 11) → Electronic Equipment 1

Hierarchical Layer 1, 2, ...,N ("Code Stream" in FIG. 11) → Electronic Equipment 2

...

Hierarchical Layer 1, 2, ...,N ("Code Stream" in FIG. 11) → Electronic Equipment N

The Examiner believes the claim language is broad enough to encompass both interpretations and (if the Examiner interprets the claim in such a way) that the only difference between that disclosed in Skodras and Qian is that Skodras is not distributing its "Code Stream" with all of the hierarchical layers to multiple electronic equipment. With this interpretation, the Examiner believes all that is needed is a reference that sends JPEG image format to multiple electronic equipment, and why it would have been obvious to do so.

Qian et al. discloses a hierarchical method and system for object-based audiovisual descriptive tagging of images for information retrieval, editing, and manipulation (FIG. 1) that teaches (i) electronic equipment ("computer" in Col. 2, lines 58 – 67; FIG. 1, elements 12, 14, 15, 16, 17, 20) which is coupled to a network (FIG. 1, element 18) having other electronic equipments coupled thereto (a computer network is by definition composed of multiple

computers being connected together using a telecommunication system for the purpose of sharing data, resources, and communication); and (ii) distributively storing information into a storage unit of each of the other electronic equipments (Col. 3, lines 31 – 34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the electronic equipment of Skodras to include having other electronic equipments coupled thereto as taught by Qian and the distributively storing unit of Skodras to include storing the hierarchical layered compressed codes as taught by Qian "...to develop a hierarchical data structure and method that enables association of descriptive data in an image", Qian, Col. 1, lines 59 – 61 and "to provide a system and method where the descriptive data may be specific to objects in the image and may include textual information, links to other files, other objects within the same image or other images, or links to web pages, and object features, such as shape, and audio annotation", Qian, Col. 1, lines 62 – 67.

The distributively storing unit of Qian distributively stores the prior compressed, coded, and divided (by hierarchy) codes of the "hierarchical coding unit" of Skodras, which in essence is the equivalent to sending JPEG images to multiple electronic equipment (computers).

Claims 4, 7, 10, 12, and 15 are not patentable over the cited reference for similar reasons described above with respect to claim 2.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Rashid whose telephone number is (571) 270-1578. The examiner can normally be reached Monday - Friday 8:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571) 272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David P. Rashid/
Examiner, Art Unit 2624

David P Rashid
Examiner
Art Unit 2624

VIKKRAM BALI
PRIMARY EXAMINER